

REMARKS

The Office Action dated September 26, 2007 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1, 3-5, 7-12, 14-22, and 24-31 are now pending in this application. Claims 1, 3-5, 7-22, and 24-31 stand rejected. Claim 13 has been canceled.

The rejection of Claim 31 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement is respectfully traversed. Applicants respectfully submit that the specification clearly describes the subject matter recited in Claim 31. For example, at page 16, lines 21-24 the specification describes a program memory and a data memory that work together to “translate between a power line carrier communication protocol and an appliance protocol.” When the specification is considered in conjunction with the subject matter of Claim 31, Applicants submit that Claim 31 complies with the enablement requirement.

For at least the reasons set forth above, Applicants respectfully request that the Section 112, first paragraph, rejection of Claim 31 be withdrawn.

The rejection of Claims 1, 3-5, 7-22, and 24-31 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,875,430 to Koether (hereinafter referred to as “Koether”) in view of U.S. Patent 4,580,276 to Andruzzi, Jr., et al. (hereinafter referred to as “Andruzzi”) is respectfully traversed.

Koether describes a bi-directional communication system (100) that provides real-time computer-aided diagnostics, asset history, accounting records, maintenance records, and energy management to ensure proper work allocation of administrative and repair tasks in the food service industry. The system (100) includes a control center (170), a plurality of kitchen base stations (150) connected to the control center (170), and a plurality of kitchen or cooking appliances (110) connected to a base station (150) located within a corresponding site or cell (105). Maintenance and/or repair, once initialized, are monitored through the control center

(170), which includes a database (190) with software diagnostics, accounting records, inventory records, and maintenance records for the particular appliance (110) under service.

Notably, Koether does not describe or suggest connecting a diagnostic interface to a plurality of appliances via a power line carrier and a serial communication bus that couples the diagnostic unit to the power line carrier. Rather, Koether describes one or more kitchen base stations being located within respective cells, and each kitchen base station communicating through wireless means, such as cellular radio, satellite, microwave, or infrared communications, with corresponding kitchen appliances. Although Koether describes the use of wired connections between the kitchen base stations and corresponding kitchen appliances, the use of wired connections are expressly described as undesirable due to the likelihood of such wires being inadvertently cut. Additionally, Koether does not describe communications between each kitchen base station and the appliances as taking place over a serial communication bus and a power line carrier.

Moreover, Applicants respectfully traverse the Examiner's assertion that Koether describes implementing the diagnostic interface within a single device. The Examiner has attempted to characterize both the kitchen base stations and the control center as describing the diagnostic interface recited in the presently pending application. However, Koether describes connecting appliances to a base station dedicated to a particular appliance cell, and connecting multiple base stations to a control center. As such, Koether cannot describe an entirely self-contained diagnostic interface.

Andruzzi describes an amplitude-shift keying/frequency-shift keying (ASK/FSK) data encoding and transmission scheme. In a particular embodiment, Andruzzi describes the transmission scheme functioning along the lines of a common power-line carrier system. Data is exchanged in bidirectional fashion (half-duplex) within a localized transmission medium defined by the electrical distribution system (metallic conductors) of a building, house, or any localized residential/commercial complex.

Claim 1 recites a method of performing service diagnostics on appliances. The method includes "connecting a diagnostic interface to a plurality of appliances, each of the

plurality of appliances in direct communication with the diagnostic interface via a power line carrier; accessing at least one appliance of the plurality of appliances; performing a service diagnosis of the at least one appliance through the diagnostic interface over the power line carrier using service functions in the at least one appliance; implementing the diagnostic interface within a single device including a display, processing circuitry generating service commands to perform the service diagnosis, a power line carrier modem configured to modulate data to communicate the data over the power line carrier, and a serial communication bus coupling the diagnostic interface to the power line carrier modem; and servicing, by the diagnostic interface, the at least one appliance via the power line carrier, said servicing comprising at least one of adjusting a characteristic of the at least one appliance and displaying to a technician the service diagnosis.”

Neither Koether nor Andruzzi, considered alone or in combination, describes or suggests a method of performing service diagnostics on appliances, as recited in Claim 1. More specifically, neither Koether nor Andruzzi, considered alone or in combination, describes or suggests implementing the diagnostic interface within a single device including a display, processing circuitry generating service commands to perform the service diagnosis, a power line carrier modem configured to modulate data to communicate the data over the power line carrier, and a serial communication bus coupling the diagnostic interface to the power line carrier modem. Rather, Koether describes an interface including multiple devices. More specifically, decisions are made by a microprocessor within a kitchen base station in accordance with data received from a control center over a data network. Further, the kitchen base station, which the Examiner equates to the diagnostic interface of the presently claimed invention, does not include a display. The kitchen base station is connected to a terminal keyboard and display unit. However, kitchen base station is not a single diagnostic interface device that includes a display. Further, in contrast to the recitations of Claim 1, Andruzzi describes a transmission scheme functioning along the lines of a common power-line carrier system where data is exchanged in bidirectional fashion (half-duplex) within a localized transmission medium. However, Andruzzi does not describe implementing a diagnostic interface for appliances within a single device that is coupled to a power line carrier modem by a serial communication bus.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Koether in view of Andruzzi.

Claims 3-5, 7-11, 30, and 31 depend from independent Claim 1. When the recitations of Claims 3-5, 7-11, 30, and 31 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 3-5, 7-11, 30, and 31 likewise are patentable over Koether in view of Andruzzi.

Claim 12 recites a diagnostic interface for performing service diagnostics on appliances. The diagnostic interface includes “a display for viewing diagnostic and service information; processing circuitry for generating service commands for an appliance; and a serial communication bus coupling said processing circuitry to a power line carrier communication interface configured to be directly connected to a plurality of appliances, wherein said power line carrier communication interface facilitates transmitting the service commands to the plurality of appliances and receiving appliance diagnostic results on a power line carrier communication system, and said diagnostic interface implemented within a single device including said display, said processing circuitry generating the service commands to service at least one appliance of said plurality of appliances, and said power line communication interface configured to modulate data to communicate the data over an alternating current (AC) power line, wherein said diagnostic interface configured to service the at least one appliance via said power line carrier communication interface by at least one of adjusting a characteristic of at least one appliance and displaying to a technician the appliance diagnostic results.”

Neither Koether nor Andruzzi, considered alone or in combination, describes or suggests a diagnostic interface for performing service diagnostics on appliances, as recited in Claim 12. More specifically, neither Koether nor Andruzzi, considered alone or in combination, describes or suggests a serial communication bus that couples a processing circuitry to a power line carrier communication interface configured to be directly connected to a plurality of appliances. Rather, Koether describes an interface including multiple devices. More specifically, decisions are made by a microprocessor within a kitchen base station in accordance with data received from a control center over a data network. Further,

the kitchen base station, which in the Office Action is equated to the diagnostic interface of the current application, does not include a display. The kitchen base station is connected to a terminal keyboard and display unit. However, kitchen base station is not a single diagnostic interface device that includes a display. Further, in contrast to the recitations of Claim 12, Andruzzi describes a transmission scheme functioning along the lines of a common power-line carrier system where data is exchanged in bidirectional fashion (half-duplex) within a localized transmission medium. However, Andruzzi does not describe implementing a diagnostic interface for appliances within a single device that is coupled to a power line carrier modem by a serial communication bus.

Accordingly, for at least the reasons set forth above, Claim 12 is submitted to be patentable over Koether in view of Andruzzi.

Claim 13 has been canceled. Claims 14-21 depend from independent Claim 12. When the recitations of Claims 14-21 are considered in combination with the recitations of Claim 12, Applicants submit that dependent Claims 14-21 likewise are patentable over Koether in view of Andruzzi.

Claim 22 recites a diagnostic system for providing access to service diagnostics on an appliance. The system includes “a plurality of appliances; a diagnostic interface configured to be directly connected to said plurality of appliances, said diagnostic interface comprising a display, wherein said diagnostic interface facilitates accepting service diagnostics commands destined for at least one appliance of said plurality of appliances, said diagnostic interface implemented within a single device including a display device, a microprocessor configured to generate the diagnostics commands, and a serial communication bus configured to couple said microprocessor to a power line carrier modem, said power line carrier modem configured to modulate data to communicate the data over an alternating current (AC) power line, wherein said diagnostic interface configured to service the plurality of appliances via said power line carrier modem by at least one of adjusting a characteristic of at least one appliance and displaying to a technician the diagnostics commands; and a dedicated appliance controller for receiving and executing the diagnostics commands.”

Neither Koether nor Andruzzi, considered alone or in combination, describes or suggests a diagnostic system for providing access to service diagnostics on an appliance, as recited in Claim 22. More specifically, neither Koether nor Andruzzi, considered alone or in combination, describes or suggests a diagnostic interface that includes a serial communication bus configured to couple a microprocessor to a power line carrier modem. Rather, Koether describes an interface including multiple devices. More specifically, decisions are made by a microprocessor within a kitchen base station in accordance with data received from a control center over a data network. Further, the kitchen base station, which in the Office Action is equated to the diagnostic interface of the current application, does not include a display. The kitchen base station is connected to a terminal keyboard and display unit. However, kitchen base station is not a single diagnostic interface device that includes a display. Further, in contrast to the recitations of Claim 22, Andruzzi describes a transmission scheme functioning along the lines of a common power-line carrier system where data is exchanged in bidirectional fashion (half-duplex) within a localized transmission medium. However, Andruzzi does not describe implementing a diagnostic interface for appliances within a single device that is coupled to a power line carrier modem by a serial communication bus.

Accordingly, for at least the reasons set forth above, Claim 22 is submitted to be patentable over Koether in view of Andruzzi.

Claims 24-29 depend from independent Claim 22. When the recitations of Claims 24-29 are considered in combination with the recitations of Claim 22, Applicants submit that dependent Claims 24-29 likewise are patentable over Koether in view of Andruzzi.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1, 3-5, 7-22, and 24-31 be withdrawn.

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In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully submitted,



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